



## DEPARTMENT OF THE INTERIOR

### Fish and Wildlife Service

#### 50 CFR Part 17

[Docket No. FWS-R8-ES-2021-0060; FF09E21000 FXES1111090FEDR 234]

RIN 1018-BE49

### Endangered and Threatened Wildlife and Plants; Designation of Critical Habitat for the Southern Sierra Nevada Distinct Population Segment of Fisher

**AGENCY:** Fish and Wildlife Service, Interior.

**ACTION:** Proposed rule; revisions and reopening of comment period.

**SUMMARY:** We, the U.S. Fish and Wildlife Service (Service), announce revisions to the critical habitat we proposed on October 19, 2021, for the federally endangered Southern Sierra Nevada distinct population segment (DPS) of fisher (*Pekania pennanti*) under the Endangered Species Act of 1973, as amended (Act). As a result of the critical habitat revisions, we now propose to designate a total of approximately 595,495 acres (240,988 hectares) as critical habitat for the Southern Sierra Nevada DPS of fisher across six units (one unit of which is further subdivided into two subunits) in California. This amounts to an overall increase of 41,041 acres (16,609 hectares) in our proposed critical habitat designation for the DPS, which includes revisions to all six units. We invite interested parties to comment on the revisions described in this document. Comments previously submitted on the October 19, 2021, proposed rule need not be resubmitted, as they will be fully considered in preparation of the final rule.

**DATES:** The comment period is reopened for the proposed rule published on October 19, 2021, at 86 FR 57773. So that we can fully consider your comments on the revisions described in this document in our final determination, submit your comments on or before [INSERT DATE 45 DAYS AFTER DATE OF FEDERAL REGISTER

PUBLICATION]. Comments submitted electronically using the Federal eRulemaking Portal (see **ADDRESSES**, below) must be received by 11:59 p.m. Eastern Time on the closing date.

**ADDRESSES:** *Document availability:* You may obtain copies of the October 19, 2021, proposed rule and associated documents on the internet at <https://www.regulations.gov> under Docket No. FWS-R8-ES-2021-0060.

*Written comments:* You may submit written comments by one of the following methods:

(1) *Electronically:* Go to the Federal eRulemaking Portal:

<https://www.regulations.gov>. In the Search box, enter FWS-R8-ES-2021-0060, which is the docket number for this rulemaking. Then, click on the Search button. On the resulting page, in the panel on the left side of the screen, under the Document Type heading, check the Proposed Rule box to locate this document. You may submit a comment by clicking on “Comment.”

(2) *By hard copy:* Submit by U.S. mail to: Public Comments Processing, Attn: FWS-R8-ES-2021-0060, U.S. Fish and Wildlife Service, MS: PRB/3W, 5275 Leesburg Pike, Falls Church, VA 22041–3803.

We request that you send comments only by the methods described above. We will post all comments on <https://www.regulations.gov>. This generally means that we will post any personal information you provide us (see **Public Comments**, below, for more information).

**FOR FURTHER INFORMATION CONTACT:** Michael Fris, Field Supervisor, U.S. Fish and Wildlife Service, Sacramento Fish and Wildlife Office, 2800 Cottage Way, Rm. W–2605, Sacramento, CA 95825; telephone 916–414–6600. Individuals in the United States who are deaf, deafblind, hard of hearing, or have a speech disability may dial 711 (TTY, TDD, or TeleBraille) to access telecommunications relay services. Individuals

outside the United States should use the relay services offered within their country to make international calls to the point-of-contact in the United States.

## **SUPPLEMENTARY INFORMATION:**

### **Public Comments**

We will accept written comments and information during this reopened comment period on our October 19, 2021, proposed rule to designate critical habitat for the Southern Sierra Nevada DPS of fisher (86 FR 57773), the revisions to the proposed critical habitat designation that are described in this document, and our revised draft economic assessment (DEA) of the proposed critical habitat designation. We will consider information and recommendations from all interested parties. We are particularly interested in comments concerning:

(1) Specific information on:

(a) The amount and distribution of habitat for the Southern Sierra Nevada DPS of fisher;

(b) What areas that were occupied at the time of listing (85 FR 29532, May 15, 2020) and that contain the physical or biological features essential to the conservation of the DPS should be included in the designation and why;

(c) Any additional areas occurring within the range of the DPS in Tulare, Kern, Fresno, Madera, Mariposa, and Tuolumne Counties in California that should be included in the designation (in particular, areas that occur outside of the new model described in this document) because they either were occupied at the time of listing and contain the physical or biological feature that is essential to the conservation of the species and that may require special management considerations, or were unoccupied at the time of listing and are essential for the conservation of the species;

(d) Special management considerations or protection that may be needed in critical habitat areas we are proposing, including managing for the potential effects of

climate change; and

(2) Land use designations and current or planned activities in the subject areas and their possible impacts on proposed critical habitat.

(3) Information on the projected and reasonably likely impacts of climate change on the DPS's proposed critical habitat.

(4) Any probable economic, national security, or other relevant impacts of designating any area that may be included in the final designation, and the benefits of including or excluding specific areas.

(5) Information on the extent to which the description of probable economic impacts in the DEA is a reasonable estimate of the likely economic impacts.

(6) Whether any specific areas, in particular those covered by a conservation program or plan, that we are proposing for critical habitat designation should be considered for exclusion under section 4(b)(2) of the Act, and whether the benefits of potentially excluding any specific area outweigh the benefits of including that area under section 4(b)(2) of the Act, and why. These areas may include Federal, Tribal, State, county, local, or private lands with permitted conservation plans (such as habitat conservation plans, safe harbor agreements, or conservation easements) covering the species or non-permitted conservation agreements and partnerships that would be encouraged by designation of, or exclusion from, critical habitat. Detailed information regarding these plans, agreements, easements, and partnerships is also requested, including:

(a) The location and size of lands covered by the plan, agreement, easement, or partnership;

(b) The duration of the plan, agreement, easement, or partnership;

(c) Who holds or manages the land;

(d) What management activities are conducted;

(e) What land uses are allowable; and

(f) If management activities are beneficial to the Southern Sierra Nevada DPS of fisher and its habitat.

(7) Whether we could improve or modify our approach to designating critical habitat in any way to provide for greater public participation and understanding, or to better accommodate public concerns and comments.

If you submitted comments or information on the October 19, 2021, proposed rule or the associated DEA during the comment period that was open from October 19, 2021, to December 20, 2021, please do not resubmit them. Any such comments are already part of the public record of this rulemaking proceeding, and we will fully consider them in the preparation of our final determination. Our final determination will take into consideration all written comments and any additional information we receive during the initial comment period and this reopened comment period. The final decision may differ from this revised proposed rule, based on our review of all information we receive during this rulemaking proceeding.

You may submit your comments and materials by one of the methods listed in **ADDRESSES**. We request that you send comments only by the methods described in **ADDRESSES**.

If you submit a comment via <https://www.regulations.gov>, your entire comment—including any personal identifying information—will be posted on the website. We will post all hardcopy comments on <https://www.regulations.gov> as well. If you submit a hardcopy comment that includes personal identifying information, you may request at the top of your document that we withhold this information from public review. However, we cannot guarantee that we will be able to do so.

Comments and materials we receive, as well as supporting documentation we used in preparing the proposed rule and DEA, will be available for public inspection on

<https://www.regulations.gov> at Docket No. FWS-R8-ES-2021-0060, or by appointment, during normal business hours, at the U.S. Fish and Wildlife Service, Sacramento Fish and Wildlife Office (see **FOR FURTHER INFORMATION CONTACT**). You may obtain copies of the proposed rule and the DEA on the internet at <https://www.regulations.gov> at Docket No. FWS-R8-ES-2021-0060, or by mail from the Sacramento Fish and Wildlife Office.

## **Background**

It is our intent to discuss in this document only those topics directly relevant to the revisions of the proposed designation of critical habitat for the Southern Sierra Nevada (SSN) DPS of fisher. For more information on the species, its habitat, and previous Federal actions concerning the SSN DPS of fisher, refer to the proposed rule published in the *Federal Register* on October 19, 2021 (86 FR 57773). Our proposed critical habitat for the SSN DPS of fisher consists of the October 19, 2021, proposed rule as modified by the revisions described in this document.

On October 19, 2021, we published in the *Federal Register* (86 FR 57773) a proposed rule to designate critical habitat for the SSN DPS of fisher in six units (one unit of which was further divided into three subunits) encompassing approximately 554,454 acres (ac) (224,379 hectares (ha)) in California. In addition, we announced the availability of a DEA of the proposed critical habitat designation. We accepted comments on the proposed rule and DEA for 60 days, ending December 20, 2021. Based on information we received during the public comment period, we propose to revise the critical habitat designation and are, therefore, reopening the comment period to allow the public additional time to submit comments on the revisions outlined herein.

Although the critical habitat designation for the fisher was proposed when the regulatory definition of habitat (85 FR 81411, December 16, 2020) and the 4(b)(2) exclusion regulations (85 FR 82376, December 18, 2020) were in place and in effect,

those two regulations have been rescinded (87 FR 37757, June 24, 2022, and 87 FR 43433, July 21, 2022) and no longer apply to any designations of critical habitat.

Therefore, for the final rule designating critical habitat for the fisher, we will apply the regulations at 424.19 and the 2016 Joint Policy on 4(b)(2) exclusions (81 FR 7226, February 11, 2016).

### **New Information and Revisions to Proposed Critical Habitat**

During the public comment period for the October 19, 2021, proposed rule, we received 63 comment letters on the proposed critical habitat designation. We received information regarding site-specific areas that two Federal landowners and a peer reviewer believe meet the definition of critical habitat but were not included in the October 19, 2021, proposed rule. We also received comments notifying us of a new Fisher Reproductive Habitat Suitability Model (2021 Reproductive Model). We also had conversations with species experts to identify additional areas that meet the definition of critical habitat (see *Habitat Analysis*, below, for more details). We subsequently determined that the 2021 Reproductive Model and comments received on site-specific habitat areas are now the best available information upon which to base critical habitat. Under our methodology, the use of this new information results in needed revisions to the critical habitat boundaries presented in our October 19, 2021, proposed rule; specifically, our new analysis of the best available information (i.e., the 2021 Reproductive Model and other site-specific information) has resulted in changes to all six units described in the October 19, 2021, proposed critical habitat designation. The revised proposed units are in the same counties in California as those in the October 19, 2021, proposed critical habitat designation. The revised proposed units are described in this document.

We propose the following unit revisions, all of which are areas occupied by the SSN DPS of fisher at the time of listing. The revisions are summarized here, and the full descriptions and acreage changes follow in *Revised Proposed Critical Habitat*

*Designation, below:*

(1) We are revising the six existing proposed units of critical habitat based on the 2021 Reproductive Model that prompted our reanalysis of the best available information and on the comments we received during the October 19, 2021, proposed rule's initial comment period. Proposed Unit 3 no longer includes subunits, and proposed Unit 4 now includes two subunits.

(2) We are adding some area to Units 1, 3, 4, and 5 based on comments we received from Federal partners and one peer reviewer during the October 19, 2021, proposed rule's initial comment period regarding the accuracy of existing versions of habitat models and follow-up conversations with species experts to evaluate the new modeled reproductive habitat information (Craig 2021, *in litt.*, pp. 3–4, 13–14; Sweitzer 2021, *in litt.*, pp. 3–7; Muldoon 2021, *in litt.*, p. 1; Tucker 2022, pers. comm.). According to Thompson et al. (2021a, pp. 8, 10) and species expert opinion, the 2021 Reproductive Model's accuracy is decreased in certain areas due to a sampling bias in the data used to create the model (see *Habitat Analysis*, below, for more details). Therefore, this revised proposed rule includes areas that species experts suggest support the physical and biological feature despite being omitted by the 2021 Reproductive Model. The areas added include extending Unit 1 to the south to better reflect fisher habitat use on the Kern Plateau based on regional monitoring; extending Unit 3 towards the Hume Lake area where occupancy monitoring and recent detections of adult females indicate habitat quality was undervalued by the 2021 Reproductive Model; adding an area east of Mammoth Pool Reservoir in Unit 4 that supports successful reproduction in atypical, high-elevation habitat that was underrepresented by the 2021 Reproductive Model; extending Unit 5 around the Shuteye Pass area that supports multiple female home ranges and contains atypical, high-elevation habitat that was underrepresented by the 2021 Reproductive Model; and extending Unit 5 to include atypical, high-elevation habitat



underrepresented by the 2021 Reproductive Model along Glacier Point Road in Yosemite National Park where fishers have been consistently detected.

(3) We are editing the physical and biological feature to ensure its clarity and to better reflect the inclusivity of reproductive habitat, which consists of denning, foraging, and dispersal areas. This is consistent with the approach taken by experts for the development of the 2021 Reproductive Model.

(4) We are revising the criteria used to identify critical habitat to use the best available science including the 2021 Reproductive Model, expert opinion on additional areas that contain the physical and biological feature that is essential to the conservation of the species, and research on fisher use of post-fire landscapes.

(5) We are continuing to consider the exclusion of Southern California Edison Company (SCE) lands and the Tule River Indian Reservation as described in our October 19, 2021, proposed rule. However, the acreages of revised proposed critical habitat on SCE and Tule River Indian Tribe lands, and thus the acreages considered for exclusion, have changed based on the revised criteria. As described in our October 19, 2021, proposed rule, the considered exclusion of the Tule River Indian Reservation is based on our partnership with the Tribe, the Tribe's long history of managing and protecting forest resources, and fisher-specific conservation measures the Tribe implements when conducting activities (Live Oak Associates, Inc. 2021, pp. 16–27). The Tribal acreage within Unit 2 considered for exclusion has decreased from 16,246 ac (6,574 ha) to 14,622 ac (5,917 ha) due to a reduction in the amount of predicted suitable habitat on the Reservation according to the 2021 Reproductive Model. The SCE acreage within Unit 4 and considered for exclusion has decreased from 10,254 ac (4,150 ha) to 8,322 (3,368 ha) mainly due to our consideration of the effects of the Creek Fire on fisher habitat.

All of the lands in the above-described revised proposed units were occupied at the time of listing and are currently occupied, contain the physical or biological feature to

support life-history functions essential to the conservation of the SSN DPS of fisher, and may require special management considerations or protection from threats as described in the October 19, 2021, proposed rule (86 FR 57773). Revised proposed unit descriptions follow for all six units, and short textual descriptions of each proposed unit are also updated in the regulatory text of the critical habitat designation.

The DEA for the proposed critical habitat designation (IEc 2021, entire) has been revised (IEc 2022, entire) and addresses additional information and considerations by the Service. Based on consultation history for the SSN DPS of fisher and with consideration of this revised proposed rule, the number of section 7 efforts is likely to be approximately 8 formal consultations, 52 informal consultations, and 4 technical assistance per year on average, with the highest costs anticipated in Units 2 and 5 (IEc 2022, pp. 2, 14–15). The additional administrative (incremental) cost of addressing adverse modification in these consultations is likely to be less than \$180,100 (2022 dollars) per year (IEc 2022, pp. 2, 17, 19). This represents an \$800 increase in the annual administrative cost relative to the July 1, 2021, version of the DEA.

*Revised Physical or Biological Feature Essential to the Conservation of the Species*

We derive the specific physical or biological feature essential for the SSN DPS of fisher from studies of the species' habitat, ecology, and life history, which are described more fully in the final listing rule (85 FR 29532, May 15, 2020) and the species report (Service 2016, entire) that was developed to supplement the proposed listing rule (79 FR 60419, October 7, 2014) and revised proposed listing rule (84 FR 60278, November 7, 2019).

We have determined that there is one feature, which is considered both physical and biological, that is essential to the conservation of the SSN DPS of fisher. Additional information can be found in the final listing rule (85 FR 29532, May 15, 2020) and the species report (Service 2016, entire) that was developed in conjunction with the proposed

listing rule. These background documents are available on the internet at

<https://www.regulations.gov> under Docket No. FWS-R8-ES-2021-0060.

After reviewing the 2021 Reproductive Model and comments we received on our October 19, 2021, proposed rule, we are revising the physical and biological feature to better align with the best available science. While the 2015 Pre-Drought Fisher Denning Habitat Suitability Model and the 2020 Post-Drought Fisher Denning Habitat Suitability Model we used as the basis of our October 19, 2021, proposed rule focused entirely on known dens, the 2021 Reproductive Model took a broader approach at identifying the habitats that fishers require to successfully reproduce. In addition to habitat required for denning, the 2021 Reproductive Model also took into consideration rearing habitat (Thompson et al. 2021a, p. 2). This includes foraging areas where females can capture prey to feed their young, and dispersal areas that mothers use to move their kits between dens and juveniles use to disperse from their natal home ranges to establish their own home ranges. Oftentimes, these denning and rearing habitats can overlap or even be the same (Thompson et al. 2021a, p. 2). Collectively, these habitats each play an important role in a female fisher successfully raising her kits. Therefore, we revise our physical and biological feature to better capture this more inclusive “reproductive habitat” that is essential to the conservation of the species. We also revise the physical and biological feature to include additional forest types that fishers use to support reproduction (Muldoon 2021, *in litt.*, p. 1; Thompson et al. 2020, p. 7).

We have determined that the following feature, which is considered both physical and biological in character, is essential to the conservation of the SSN DPS of fisher: Suitable reproductive habitat that includes intermixed denning, foraging, and dispersal areas. Such habitat provides structural features for parturition, raising kits, protection from adverse weather conditions, facilitation of safe movement, sites to rest and thermoregulate, foraging opportunities, and cover to reduce predation risk for adults and

young. The characteristics of this physical and biological feature include:

(a) Forest types described as Douglas fir (*Pseudotsuga menziesii*), eastside pine, Jeffrey pine (*Pinus jeffreyi*), montane hardwood-conifer, montane hardwood, montane riparian, ponderosa pine (*Pinus ponderosa*), Sierran mixed conifer, white fir (*Abies concolor*), red fir (*Abies magnifica*), or lodgepole pine (*Pinus contorta*) of California Wildlife Habitat Relationships size and density classes 4M, 4D, 5M, 5D, or 6 (Mayer and Laudenslayer 1988, entire; Thompson et al. 2020, p. 7).

(b) Forest stands in or near drainages with clusters of large, mature trees and snags, high canopy cover (generally greater than or equal to 60 percent), complex horizontal and vertical forest structure (e.g., multilayered canopy, moderate shrub cover, downed wood, vegetation of varying age classes), a moderate intermix of California black oak (*Quercus kelloggii*), and fairly steep slopes (greater than or equal to 17 percent) (Zhao et al. 2012, p. 117; Spencer et al. 2015, pp. 33–35; Green et al. 2019, entire).

(c) Multiple large diameter trees (live or dead), such as conifers greater than or equal to 35 inches (in) (89 centimeters (cm)) and hardwoods greater than or equal to 25 in (63 cm) in diameter (Spencer et al. 2015, p. 39), with cavities that provide secure natal and maternal den sites (Green et al. 2019, p. 136). Some of these large diameter trees or snags should also have branch platforms, broken top platforms, mistletoe (*Arceuthobium* spp.) infections, and other deformities or structures that provide resting sites (Green et al. 2019, p. 136).

(d) Shrub and tree clumps, large downed logs, and other structures that provide continuous dense cover or patches of dense cover that are close together to provide protection from predators (Spencer et al. 2015, p. 33; Green 2017, pp. 101–102).

(e) Intermixed foraging areas that typically include a diversity of vegetation types and seral stages to support a variety of prey species (such as western gray squirrels (*Sciurus griseus*), Douglas squirrels (*Tamiasciurus douglasii*), California ground squirrels

(*Otospermophilus beecheyi*), dusky-footed woodrats (*Neotoma fuscipes*), and other small mammals) (Spencer et al. 2015, p. 30), and structures that provide fishers resting sites and protection from predators.

(f) Intermixed dispersal areas that provide connectivity between patches of denning habitat to allow for movement of individuals within subpopulations. Dispersal areas must contain structures and habitat characteristics that facilitate resting and safe movement (Spencer et al. 2015, p. 52). These habitat characteristics and structures include some overhead cover from trees or shrubs (i.e., greater than 30 percent for male dispersal and greater than 60 percent for female dispersal (Tucker et al. 2017, pp. 14–15; Spencer et al. 2016, p. 10)), snags, downed logs, or other components to protect fishers from predation and allow for sufficient resting opportunities.

#### *Revised Criteria Used To Identify Critical Habitat*

Based on the release of the 2021 Reproductive Model and after reviewing peer and public comments on our October 19, 2021, proposed rule, we revised the criteria used to identify critical habitat. This new information represents the best available science that forms the basis of our proposed designation. In summary, we made the following revisions to the criteria for identifying critical habitat:

(1) Replace the 2015 Pre-Drought Fisher Denning Habitat Suitability Model and the 2020 Post-Drought Fisher Denning Habitat Suitability Model with the 2021 Reproductive Model;

(2) Include additional areas that species experts suggest were underrepresented or undervalued by the 2021 Reproductive Model but support the physical and biological feature and are essential to the conservation of the species (see *Habitat Analysis*, below, for more details);

(3) Use wildfire burn severity data to identify areas that no longer support the physical and biological feature due to impacts of recent wildfires; and

(4) Exclude buildings and the defensible space around buildings solely via text instead of using Cal Fire's housing density data to spatially remove these areas on the associated critical habitat maps.

As required by section 4(b)(2) of the Act, we use the best scientific data available to designate critical habitat. In accordance with the Act and our implementing regulations at 50 CFR 424.12(b), we review available information pertaining to the habitat requirements of the species and identify specific areas within the geographical area occupied by the species at the time of listing and any specific areas outside the geographical area occupied by the species to be considered for designation as critical habitat. We are not currently proposing to designate any areas outside the geographical area occupied by the species because we have not identified any unoccupied areas that meet the definition of critical habitat. We determined that occupied areas are sufficient for contributing to the conservation of the SSN DPS of fisher, following our evaluation of all suitable habitat across the DPS's range that has documented use by fishers.

For areas within the geographic area occupied by the species at the time of listing, we employed the following basic steps to delineate critical habitat (which are described in detail in the text following this list):

(1) We compiled fisher detection data and determined the geographic area that was occupied by the species at the time of listing (see *Occupancy Analysis*, below).

(2) Using the best available science, including habitat models, expert opinion, and reasonable inferences regarding female home range size and the effect of high severity wildfire, we conducted a habitat analysis to identify the spatial extent of the physical and biological feature (see *Habitat Analysis*, below).

(3) Based on the results of these analyses, we delineated six discrete critical habitat units (including one unit—Unit 4—that is subdivided into two subunits) separated by evidence of genetic discontinuity and gaps in contiguous reproductive habitat typically

associated with major river canyons (see *Mapping Critical Habitat Units*, below).

### *Data Sources*

For our occupancy analysis, habitat analysis, and subsequent unit delineations, we used a variety of data sources that provide information regarding the occupied range of the fisher, the spatial extent of suitable fisher habitat, and habitat condition, including:

(1) Fisher observation data from the U.S. Forest Service (USFS) Natural Resource Information System, University of California (UC) Berkeley Sierra Nevada Adaptive Management Project, USFS Sierra Nevada Carnivore Monitoring Program, and National Park Service (NPS) databases;

(2) Models developed by the Conservation Biology Institute (CBI), including the 2021 Reproductive Model and the 2020 Post-Drought Fisher Landscape-Scale Habitat Suitability Model (2020 Landscape-Scale Model);

(3) Wildfire data from the joint U.S. Geological Survey (USGS)–USFS Monitoring Trends in Burn Severity (MTBS) project; and

(4) Lake, reservoir, and pond dataset from California Department of Fish and Wildlife.

### *Occupancy Analysis*

We used recent fisher observation data to identify the geographic area occupied by the species at the time of listing. We reviewed USFS, NPS, and UC Berkeley fisher detection data including visual observations, remote camera detections, scat and hair samples, tracks, and radio telemetry locations from 1990–2020. This timeframe overlaps with the beginning of extensive surveying and monitoring efforts in the Sierra Nevada that continue today (Zielinski et al. 1995, entire) and recent northward population expansion of fishers that has occurred over the last few decades (Tucker et al. 2014, p. 131). Fisher occupancy has remained relatively stable throughout the southern Sierra Nevada from 2002 through 2015 (Zielinski et al. 2013, pp. 8–10; Tucker 2019, pers.

comm.), indicating that, in general, sites that were previously occupied continued to be occupied into the mid-2010s. Analyses on occupancy during recent years (2016–2021) are ongoing (Craig 2021, *in litt.*, p. 3).

Based on these data, we determined that the northern extent of the geographic area occupied at the time of listing was the Tuolumne River in Yosemite National Park (Mariposa County) and the southern limit was the Greenhorn Mountains in Sequoia National Forest (Kern County). The eastern limit of the current species' range is the high-elevation, granite-dominated mountains and the western limit is the low-elevation extent of mixed-conifer forest.

### *Habitat Analysis*

We used two habitat models developed by CBI to better understand the broad-scale spatial extent of reproductive habitat in the southern Sierra Nevada. Our analysis was largely focused on reproductive habitat because this habitat type is essential for successful denning, rearing of kits, and juvenile recruitment. Reproductive habitat also supports other life-history activities necessary for female and male survival, such as foraging, resting, and dispersal. Therefore, sustaining and enhancing the broad-scale spatial extent of reproductive habitat, composed of fine-scale denning, foraging, and dispersal areas, is vital to conservation and recovery of the species (Thompson et al. 2021a, p. 9).

We used the 2021 Reproductive Model (Thompson et al. 2021a, entire) to identify the broad-scale spatial extent of reproductive habitat. This 2021 Reproductive Model used a combination of fisher observations indicative of habitat used by female fishers for raising their young, including known den locations, detections of family groups, and detections of adult females during the denning period (Thompson et al. 2021a, p. 3). The 2021 Reproductive Model also includes 12 biotic and abiotic predictors including climate, hydrology, and forest structure variables (Thompson et al. 2021a, pp. 4, 6). By



using a combination of fisher observation data paired with a variety of environmental variables, the 2021 Reproductive Model's results are representative of habitat that is most likely to support fisher reproduction (i.e., habitat that supports potential dens plus foraging areas that females use to capture prey and dispersal areas that connect multiple dens within a home range and allows juveniles to disperse from their natal ranges to establish their own home ranges). There are known instances where female fishers have denned and successfully reproduced outside of the modeled extent of predicted reproductive habitat (see more details regarding underrepresentation and undervaluation of habitat quality below). Model results are not intended to conclude complete absence of dens or fishers outside of the predicted areas. It is important to note that the 2021 Reproductive Model merely predicts the areas that are most likely to support fisher reproduction, rather than representing the absolute area where fishers will successfully reproduce (Thompson et al. 2021a, p. 9).

The 2021 Reproductive Model's output is presented as two classes: high-quality and moderate-quality reproductive habitat. However, the suitability thresholds are somewhat subjective, and the modelers cautioned that the boundaries between the two classes should not be treated as absolutes (Thompson et al. 2021a, p. 10). For the purposes of identifying the spatial extent of the physical and biological feature, we considered both high-quality and moderate-quality modeled reproductive habitat to represent suitable habitat most likely to support successful reproduction.

The Kern Plateau, where females have repeatedly been detected during regional monitoring surveys (Craig 2021, *in litt.*, p. 3), has unique environmental conditions due to differences in climate, geology, and vegetation compared to the west slope of the Sierra Nevada (Spencer et al. 2015, p. 44). These unique conditions result in true differences in habitat value on the Kern Plateau compared to the rest of the fisher's range (Spencer et al. 2015, p. 35). For this reason, the Kern Plateau is excluded from the 2021 Reproductive

Model (Thompson et al. 2021a, p. 4). To ensure that essential areas of suitable habitat on the Kern Plateau are considered for inclusion in critical habitat, we used CBI's 2020 Landscape-Scale Model, which predicts the probability of fisher occurrence (also interpreted as a measure of habitat quality) (Spencer et al. 2015, pp. A-1–A-4). Areas that are strongly selected for by fishers have a predicted probability of fisher occupancy (i.e., habitat suitability) of 0.41 and higher (Spencer et al. 2015, p. 42). For the purposes of our analysis, we consider habitat above this threshold to be “high-quality habitat.” Using the 2020 Landscape-Scale Model, we identified all high-quality habitat on the Kern Plateau. We compared this high-quality habitat with fisher detection data and determined that this output is an appropriate surrogate for reproductive habitat on the Kern Plateau.

To determine if a patch of reproductive habitat, or high-quality habitat in the case of the Kern Plateau, is essential to the conservation of the DPS, we considered the size of the patch in relation to fisher ecology. We compared patch size with female territory size to determine the minimum size patch necessary to aid in the conservation of the species. Based on an analysis of female home ranges, species experts identified an average female breeding territory size of 2,471 acres as the appropriate scale to assess fisher habitat (Spencer et al. 2016, p. 27). This average territory size takes into account overlap between neighboring female home ranges and variation in habitat quality. This territory size is also similar to the average size of a female fisher's core use area, which is the portion of the home range where an animal spends a majority of its time (Spencer et al. 2015, pp. 17–18). For the purposes of our analysis, we rounded this territory size up and consider a female home range size to be 2,500 acres. We determined patches of reproductive habitat that are of an appropriate size to support a subpopulation (i.e., at least five female fishers based on analyses conducted by Spencer et al. (2015, pp. 41–42)) as essential to the conservation of the species. Therefore, patches of reproductive habitat 12,500 ac (5,059 ha) or larger are included in the revised proposed critical habitat

designation. We also included one additional patch that plays an important role for the DPS despite being slightly smaller than our minimum size threshold. This patch is approximately 12,049 ac (4,876 ha) and is located within the average juvenile female dispersal distance (3.04 mi (4.9 km) (Spencer et al. 2015, p. 20)) of two subpopulations with high occupancy rates. In addition to providing a moderately large patch of reproductive habitat, this patch also provides important connectivity between the two robust subpopulations (Coleman 2022, pers. comm.). Further, this patch is of heightened importance to the DPS when considering the impacts that recent fires have had on surrounding habitats (Coleman 2022, pers. comm.).

The models used for our analysis resulted in outputs with several “holes” where modeled reproductive habitat quality dropped below a threshold set by the modelers based on their understanding of reproductive habitat selection by fishers. Based on our review of aerial imagery, canopy cover, and other data, the habitat within these holes is still expected to support fisher foraging or dispersal, especially for males. Due to their proximity to denning habitat and their utility to support other life-history needs of the fisher, we determined that the habitat within these holes can play an essential role in an established home range or for a dispersing female or male fisher. Therefore, we determined that these areas contain the physical and biological feature essential to the conservation of the SSN DPS of fisher and we include them in the proposed critical habitat designation.

The modelers note that sampling bias in the 2021 Reproductive Model’s training data (i.e., data used to build the model) may result in limited accuracy of the model’s results in certain areas (Thompson et al. 2021a, pp. 8, 10). In some circumstances, this sampling bias resulted in the 2021 Reproductive Model predicting certain areas to be of low quality even though the area supports fisher and fisher habitat. This undervaluing of habitat quality is most likely to occur at higher elevations where training data were

lacking or in areas with slightly different habitat composition than represented by the training data (Thompson et al. 2021a, pp. 8, 10). Thus, Thompson et al. (2021a, p. 10) recommends using the 2021 Reproductive Model in concert with additional information, such as species expert opinion on habitat quality and availability in local areas. To ensure our methodology does not inadvertently omit areas that support the physical and biological feature and are essential to the conservation of the species, we solicited expert opinion to identify areas where the 2021 Reproductive Model or the 2020 Landscape-Scale Model may have underrepresented habitat availability and quality. Using these identified areas of additional habitat availability, we include the following areas that support the physical and biological feature and are essential to the conservation of the species despite being outside of the modeled area:

(1) We added unmodeled habitat to the southern extent of Unit 1 on the Kern Plateau. This model correction better reflects fisher habitat use based on regional monitoring (Craig 2021, *in litt.*, pp. 3, 13). This added area is also important considering the impacts of wildfires that have altered habitat in surrounding areas (Craig 2021, *in litt.*, p. 3).

(2) We added unmodeled habitat to the northern extent of Unit 3 in the Hume Lake area where consistent occupancy throughout the duration of USFS's monitoring program and recent detections of adult females confirm the use of habitat in this area and thus suggest the 2021 Reproductive Model undervalues habitat quality here (Tucker 2022, pers. comm.).

(3) We added a patch of unmodeled habitat east of Mammoth Pool Reservoir that contains the physical and biological feature, has been consistently occupied throughout the duration of USFS's monitoring program's history, and supports successful reproduction as indicated by detections of adult females and kits (Craig 2021, *in litt.*, pp. 4, 14; Tucker 2022, pers. comm.). In addition to supporting reproduction, this area also

provides important connectivity between occupied areas to the south and west. This area contains atypical, high-elevation habitat that the 2021 Reproductive Model undervalued in quality (Tucker 2022, pers. comm.).

(4) We added unmodeled habitat to the southeastern extent of Unit 4 to include an area around Shuteye Peak, Little Shuteye Peak, and Shuteye Pass. This area, which consists of atypical habitat at higher elevations that the 2021 Reproductive Model undervalues in quality, supports several adult females' home ranges that were monitored for the Sierra Nevada Adaptive Management Project Fisher Study (Sweitzer 2021, *in litt.*, pp. 3-7; Sweitzer et al. 2015, entire). In addition to supporting known reproduction, this area was also identified as an important habitat corridor for fishers making both long- and short-distance dispersal movements (Sweitzer 2021, *in litt.*, pp. 4, 6–7; Sweitzer et al. 2015, p. D109).

(5) We added unmodeled habitat to the northeastern extent of Unit 5 to include occupied habitat along Glacier Point Road in Yosemite National Park based on consistent detections of males and females by the NPS (Muldoon 2021, *in litt.*, p. 1). This area consists of atypical habitat types at high elevations that were underrepresented in the 2021 Reproductive Model despite the importance for the persistence of the species.

Within the areas modeled as reproductive habitat and the additional essential areas that support reproduction according to species experts, we identified and removed certain areas that do not contain the physical and biological feature or are not essential to the conservation of the species. First, we removed all lakes, reservoirs, and ponds from the proposed designation because these features do not support the fisher's life-history activities.

Next, we considered the impact of recent wildfires on fisher habitat. The fisher's use of post-fire landscapes is not well understood because few studies on the topic exist, but high-severity fire is believed to have significant negative effects on the fisher and its

habitat (Craig 2021, *in litt.*, p. 2). One recent study in the southern Sierra Nevada found that fishers avoid areas dominated by high- and moderate-severity fire and the fisher's use of post-fire habitat may center on larger, more contiguous patches of low-severity burns or unburned islands and on fine-scale topographic features associated with landscape concavity (e.g., ravines) (Thompson et al. 2021b, p. 235). A study conducted on the Northern California-Southern Oregon DPS of fisher concluded that fisher abundance decreased significantly in areas of low-, moderate-, and high-severity wildfire (Green et al. 2022, p. 12). The fisher's use of a burned area appears to gradually increase as time since the fire passes. Both Thompson et al. (2021b, pp. 235–236) and Green et al. (2022, p. 14) found that fishers began to explore the burned landscape after 2 or more years post-fire as vegetative cover, such as shrubs, begin to recover. In a study on the Kern Plateau, fishers were detected deeper into burned patches when surveyed 10+ years post-fire, mirroring Thompson et al.'s (2021b, p. 236) conclusion that fishers' willingness to venture farther into burned habitat increases over time (Hanson 2013, pp. 26–27; Hanson 2015, pp. 499–500).

While high-severity fire may not completely remove all suitable fisher habitat, it likely precludes successful reproduction, at least until the habitat structure required for raising kits recovers. Hanson (2015, p. 500) concluded that the fisher's use of high-severity burn areas revolves around foraging, rather than denning. Green et al. (2022, p. 14) posited that the two fishers detected within the studied burned areas were likely dispersing individuals that were attempting to establish home ranges, although one of the individuals (a female) was not detected in follow-up surveys, indicating she did not successfully establish a home range in the area. Similarly, Thompson et al. (2021b, p. 238) concluded that dispersing fishers may be drawn to burned landscapes with increased prey availability and reduced conflict with territorial adults, but post-burn habitat is unlikely to support reproduction due to lack of resting and denning structures, at least in

the short term.

Based on the best available science, we determined that the physical and biological feature does not occur in areas that recently burned in large, contiguous patches at high severity, especially along the periphery of modeled reproductive habitat patches. The 2021 Reproductive Model used vegetation data from 2016, and, therefore, does not account for impacts of recent wildfires. We used MTBS Differenced Normalized Burn Ratio data from all wildfires that overlapped modeled fisher habitat from 2016 through 2020 to identify vegetation burn severity classes of individual fires. Using these data, we excluded from the critical habitat designation the burned areas that no longer support the physical and biological feature. Although MTBS data for 2021 wildfires are not currently available for analysis in this revised proposed designation, we will consider the appropriateness of using 2021 data following our methodology described here if the data become available while we are preparing the final rule. Incorporating these data in our final rule could potentially reduce the area designated as critical habitat if burn severity data suggest the physical and biological feature was removed in certain areas due to the 2021 fires.

Finally, we considered areas with high human activity (i.e., areas immediately surrounding houses and buildings) that, although they may support fishers and their habitat, are not essential to the conservation of the DPS. Fishers are less likely to den in areas with high levels of human activity, such as immediately adjacent to human structures (Spencer et al. 2017, p. 4). Further, areas surrounding homes and buildings generally have been and will be treated heavily to reduce the risk of fire to human life and property. These intense fuels treatments (such as removing all ground vegetation within the defensible space surrounding a building) typically result in reduced habitat quality for fishers. We did not geospatially remove houses and buildings and the defensible space around them from the maps under **Proposed Regulation Promulgation**,

below, because accurate geospatial data were not available to us. However, buildings and the 100 feet (30.5 meters) of defensible space around buildings have been excluded by text in the proposed rule and are not proposed for designation as critical habitat because they do not contain the physical and biological feature. Therefore, if the critical habitat is finalized as proposed, a Federal action involving these textually excluded lands, even if within the boundaries of critical habitat as shown by the maps of the rule, would not trigger section 7 consultation with respect to critical habitat and the requirement of no adverse modification unless the specific action would affect the physical and biological feature in the adjacent critical habitat.

#### *Mapping Critical Habitat Units*

Consistent with previous analyses conducted for the Southern Sierra Nevada Fisher Conservation Assessment (Spencer et al. 2015, pp. 41–52, A-4–A-5), six discrete units (including one unit—Unit 4—that is subdivided into two subunits) were delineated based on evidence of genetic discontinuity and gaps between patches of modeled habitat, typically associated with major river canyons. Unit 1 (Kern Plateau) and Unit 2 (South Sequoia) were separated based on a break in modeled habitat continuity along the Kern River Canyon. Unit 2 abuts Unit 3 (North Sequoia), but the units were delineated based on evidence of genetic discontinuity (Tucker et al. 2014, pp. 129–132; Spencer et al. 2015, pp. 10, 46). Consistent with Spencer et al. (2015, pp. 41, 46), we used Bear Creek in Mountain Home Demonstration State Forest to separate Units 2 and 3. Unit 3 and Unit 4 (South Sierra; Subunit 4A—Blue Canyon) are separated by a gap in suitable habitat and evidence of genetic subdivision associated with the Kings River Canyon (Tucker et al. 2014, pp. 129–132). A break in modeled reproductive habitat separates Subunit 4A from Subunit 4B (Mammoth Pool East). Unit 4 (Subunit 4B) and Unit 5 (North Sierra) are separated by the San Joaquin River and the associated discontinuity of suitable fisher habitat. Tucker et al. (2014, pp. 131–132) found slight genetic separation between the



areas mapped as Unit 4 and Unit 5. Finally, Unit 5 and Unit 6 (Stanislaus) are separated by the break in modeled habitat in the vicinity of the Merced River.

Under this revised proposal, six units (including one unit—Unit 4—that is subdivided into two subunits) are proposed for designation based on the physical and biological feature being present to support the fisher's life-history processes. All of the units contain the identified physical and biological feature (and all characteristics of the physical and biological feature) and support multiple life-history processes.

The revised proposed critical habitat designation is defined by the maps, as modified by any accompanying regulatory text, presented at the end of this document under **Proposed Regulation Promulgation**. We include more detailed information on the boundaries of the critical habitat designation in the preamble of this document. We will make the coordinates or plot points or both on which each map is based available to the public on <https://www.regulations.gov> at Docket No. FWS-R8-ES-2021-0060.

#### *Revised Proposed Critical Habitat Designation*

In total, we now propose to designate approximately 595,495 ac (240,988 ha) in six units (one unit of which is subdivided into two subunits). The six areas we propose as critical habitat (from south to north) are: (1) Kern Plateau; (2) South Sequoia; (3) North Sequoia; (4) South Sierra, including two subunits; (5) North Sierra; and (6) Stanislaus. The revised proposed critical habitat areas described below constitute our best assessment, at this time, of areas that meet the definition of critical habitat, and all units were occupied at the time of listing and are considered currently occupied by the species. The table below shows the proposed unit names, land ownership, and approximate acreage.

This document also presents brief descriptions of the revised units, including the reasons why they meet the definition of critical habitat for the SSN DPS of fisher. All units contain the physical and biological feature essential to the conservation of the

species and that may require special management considerations or protection. This revised proposed critical habitat designation includes overlap of two units with portions of designated critical habitat for the federally threatened Yosemite toad (*Anaxyrus canorus*) (see 50 CFR 17.95(d) and 81 FR 59046, August 26, 2016). This revised proposed rule also includes overlap of one unit each with portions of designated critical habitat for the federally threatened Little Kern golden trout (*Oncorhynchus aguabonita whitei*) (see 50 CFR 17.95(e) and 43 FR 15427, April 13, 1978) and the federally endangered California condor (*Gymnogyps californianus*) (see 50 CFR 17.95(b) and 41 FR 41914, September 24, 1976). Overlap of proposed critical habitat for the SSN DPS of fisher includes 6,568 ac (2,657 ha) of Yosemite toad designated critical habitat, 7,847 ac (3,176 ha) of Little Kern golden trout designated critical habitat, and 118 ac (48 ha) of California condor designated critical habitat. Acreages of overlap are noted in the applicable unit descriptions, below.

**Table of Revised Proposed Critical Habitat Units for the SSN DPS of Fisher**

| <b>Critical Habitat Unit</b>          | <b>Land Ownership by Type</b> | <b>Approx. Acres</b> | <b>Approx. Hectares</b> | <b>Proposed Changes in Acres (Hectares)</b> | <b>Previous Unit Numbering</b>   |
|---------------------------------------|-------------------------------|----------------------|-------------------------|---|----------------------------------|
| Unit 1—<br>Kern Plateau               | Federal                       | 77,397               | 31,322                  | + 13,266<br>(5,369)                         | No Change                        |
|                                       | State                         | 0                    | 0                       | 0 (0)                                       |                                  |
|                                       | Tribal                        | 0                    | 0                       | 0 (0)                                       |                                  |
|                                       | Unclassified/Private          | 781                  | 316                     | + 127 (51)                                  |                                  |
|                                       | <b>Unit Total</b>             | <b>78,178</b>        | <b>31,637</b>           | <b>+ 13,393<br/>(5,419)</b>                 |                                  |
| Unit 2—<br>South Sequoia              | Federal                       | 125,568              | 50,815                  | + 32,462<br>(13,136)                        | No Change                        |
|                                       | State                         | 3,461                | 1,401                   | + 1,314<br>(532)                            |                                  |
|                                       | Tribal <sup>1</sup>           | 14,622               | 5,917                   | – 1,624 (657)                               |                                  |
|                                       | Unclassified/Private          | 6,310                | 2,554                   | + 2,172<br>(880)                            |                                  |
|                                       | <b>Unit Total</b>             | <b>149,962</b>       | <b>60,687</b>           | <b>+ 34,325<br/>(13,890)</b>                |                                  |
| Unit 3—<br>North Sequoia <sup>2</sup> | Federal                       | 108,015              | 43,712                  | + 177 (72)                                  | Formerly Subunits 3A, 3B, and 3C |
|                                       | State                         | 1,889                | 765                     | + 188 (77)                                  |                                  |
|                                       | Tribal                        | 0                    | 0                       | 0 (0)                                       |                                  |
|                                       | Unclassified/Private          | 5,048                | 2,043                   | + 1,911                                     |                                  |

|   |                      |                |                |  |   |
|---|----------------------|----------------|----------------|--|---|
|   |                      |                |                | (774)  |   |
|   | <b>Unit Total</b>    | <b>114,952</b> | <b>46,519</b>  | <b>+ 2,276<br/>(922)</b>                                   |   |
| Unit 4—<br>South<br>Sierra <sup>3</sup> | Federal              | 60,462         | 24,467         | + 14,339<br>(5,802)  | Unit<br>subdivided<br>into two<br>subunits<br>(below) |
|   | State                | 0              | 0              | 0 (0)  |   |
|   | Tribal               | 0              | 0              | 0 (0)  |   |
|   | Unclassified/Private | 15,638         | 6,328          | + 738 (298)  |   |
|   | <b>Unit Total</b>    | <b>76,100</b>  | <b>30,796</b>  | <b>+ 15,077<br/>(6,101)</b>                                |   |
| Subunit<br>4A: Blue<br>Canyon           | Federal              | 46,499         | 18,817         | No subunit in<br>previous<br>proposed<br>rule <sup>4</sup> | New<br>Subunit  |
|   | State                | 0              | 0              |  |   |
|   | Tribal               | 0              | 0              |  |   |
|   | Unclassified/Private | 15,638         | 6,328          |  |   |
|   | <b>Subunit Total</b> | <b>62,137</b>  | <b>25,146</b>  |  |   |
| Subunit<br>4B:<br>Mammoth<br>Pool East  | Federal              | 13,963         | 5,650          | No subunit in<br>previous<br>proposed<br>rule <sup>4</sup> | New<br>Subunit  |
|   | State                | 0              | 0              |  |   |
|   | Tribal               | 0              | 0              |  |   |
|   | Unclassified/Private | 0              | 0              |  |   |
|   | <b>Subunit Total</b> | <b>13,963</b>  | <b>5,650</b>   |  |   |
| Unit 5—<br>North<br>Sierra              | Federal              | 135,918        | 55,004         | – 1,512 (612)  | No Change   |
|   | State                | 0              | 0              | 0 (0)  |   |
|   | Tribal               | 0              | 0              | 0 (0)  |   |
|   | Unclassified/Private | 9,865          | 3,992          | + 65 (26)  |   |
|   | <b>Unit Total</b>    | <b>145,783</b> | <b>58,996</b>  | <b>– 1,447 (586)</b>                                       |   |
| Unit 6—<br>Stanislaus                   | Federal              | 29,920         | 12,108         | – 22,384<br>(9,059)  | No Change   |
|   | State                | 0              | 0              | 0 (0)  |   |
|   | Tribal               | 0              | 0              | 0 (0)  |   |
|   | Unclassified/Private | 601            | 243            | – 197 (80)   |   |
|   | <b>Unit Total</b>    | <b>30,521</b>  | <b>12,352</b>  | <b>– 22,581<br/>(9,138)</b>                                |   |
| <b>Total</b>                            | Federal              | 537,279        | 217,429        | + 36,346<br>(14,708)                                       |   |
|   | State                | 5,350          | 2,165          | + 1,502<br>(608)   |   |
|   | Tribal               | 14,622         | 5,917          | – 1,624 (657)  |   |
|   | Unclassified/Private | 38,243         | 15,476         | + 4,817<br>(1,949)   |   |
|   | <b>TOTAL</b>         | <b>595,495</b> | <b>240,988</b> | <b>+ 41,041<br/>(16,609)</b>                               |   |

Note: Area sizes may not sum due to rounding.

<sup>1</sup>These lands are held in Federal trust status by the United States for the Tule River Indian Tribe of the Tule River Reservation, California.

<sup>2</sup>In the October 19, 2021, proposed rule (86 FR 57773), Unit 3 consisted of three subunits. Under this revised proposed rule, we determined that subdividing this unit into subunits was not appropriate because there is no genetic differentiation or significant breaks of contiguous habitat within the unit.

<sup>3</sup>In this revised proposed rule, we propose that Unit 4 consists of two subunits, whereas

there were no subunits within Unit 4 in the October 19, 2021, proposed rule (86 FR 57773). For this revised proposed rule, a significant break in contiguous habitat within Unit 4 indicates that the unit should be managed as two subunits.

<sup>4</sup> Previous proposed rule refers to the October 19, 2021, proposed rule published at 86 FR 57773.

The revised proposed critical habitat designation is defined by the map or maps, as modified by any accompanying regulatory text, presented at the end of this document under **Proposed Regulation Promulgation**. The rule portion of this document depicts all the proposed critical habitat units as revised by this proposal. We include more detailed information on the boundaries of the revised proposed critical habitat designation in the discussion of revised proposed individual units, below.

#### *Unit 1: Kern Plateau*

Unit 1 consists of 78,178 ac (31,637 ha) of lands in the Sierra Nevada mountains in Tulare County, California. Unit 1 is situated on the Kern Plateau, east of the Kern River, west of South Fork Kern River, north of Cannell Peak, and south of Templeton Mountain. Lands within this unit include approximately 77,397 ac (31,322 ha; 99 percent) in Federal ownership (Inyo National Forest and Sequoia National Forest, USFS) and 781 ac (316 ha; 1 percent) in private ownership. General land use within this unit includes forest management (e.g., timber harvest, fuels reduction, hazard tree management, forest restoration, prescribed fire), grazing, and recreation.

Unit 1 is occupied by the fisher and contains the physical and biological feature essential to the conservation of the species. This unit is the only unit not on the west slope of the Sierra Nevada; is located on the Kern Plateau, which supports unique environmental conditions compared to the rest of the fisher's range due to differences in climate, geology, and vegetation; and has a complex mosaic of mixed-age forest stands intermixed with open areas and shrublands (Spencer et al. 2015, p. 44). Additionally, fishers in this unit occupy higher elevations than in other units, likely due to the lesser

accumulation of snow on the Kern Plateau (Spencer et al. 2015, p. 44). The unique environmental conditions of this unit provide important redundancy and representation for the DPS.

Threats identified within this unit include wildfire and wildfire suppression; climate change; tree mortality from drought, disease, and insect infestation; vegetation management; and exposure to toxicants. Special management considerations or protection measures to reduce or alleviate the threats may include: (1) Implementing forest management practices, especially the use of prescribed fire, that reduce the risk of catastrophic wildfire and improve habitat resiliency in and adjacent to fisher habitat; (2) minimizing habitat disturbance, fragmentation, and destruction (at the stand scale, home-range scale, and landscape scale) from vegetation management activities through the use of conservation measures; and (3) preventing, locating, and remediating trespass marijuana grow sites and other sources of toxicants. Federal lands in this unit are managed under the Land Management Plan for the Inyo National Forest (USFS 2019, entire) and the Sierra Nevada Forest Plan Amendment (USFS 2004, entire).

#### *Unit 2: South Sequoia*

Unit 2 consists of 149,962 ac (60,687 ha) of lands in the Sierra Nevada mountains in Kern and Tulare Counties, California. This unit extends northward from approximately Woodward Peak in the Greenhorn Mountains until it abuts Unit 3 to the north, where there is evidence of genetic discontinuity between the two subpopulations in the area of Mountain Home Demonstration State Forest (Mountain Home) (Tucker et al. 2014, pp. 129–131). The northern boundary of Unit 2 roughly follows Bear Creek in the Tule River Watershed until its headwaters, then continues in a linear northeasterly path to the eastern edge of the unit. The unit lies west of Isabella Lake, the Kern River, and Sagebrush Gulch. Unit 2 is east of Springville and California Hot Springs. Lands within this unit include approximately 124,750 ac (50,484 ha; 83 percent) managed by USFS (Sequoia

National Forest, Giant Sequoia National Monument) and 818 ac (331 ha; 1 percent) managed by the Bureau of Land Management (BLM). Also, there are 3,461 ac (1,401 ha; 2 percent) in State ownership (Cal Fire), 14,622 ac (5,917 ha; 10 percent) that are Tribal lands (i.e., the Tule River Indian Tribe of the Tule River Reservation, California), and 6,310 ac (2,554 ha; 4 percent) in private ownership. We are considering excluding 14,622 ac (5,917 ha) of the Tule River Reservation based on the Tribe's long history of managing natural resources on the Reservation. General land use within this unit includes forest management (e.g., timber harvest, fuels reduction, hazard tree management, forest restoration, prescribed fire), grazing, recreation, residential development, and management for protection of natural resources.

Unit 2 is occupied by the fisher and contains the physical and biological feature essential to the conservation of the species. This unit is important for the resiliency, redundancy, and representation of the DPS because it supports the highest recorded fisher occupancy rates (Tucker 2020, pers. comm.), the highest predicted average habitat quality (Spencer et al. 2015, p. 46), and the highest genetic diversity (Tucker et al. 2014, entire) in the DPS. This unit supports habitat features and conditions that are optimal for successful reproduction, such as scattered giant sequoia groves and relatively abundant old-growth mixed-conifer forest with large sugar pines, high basal areas, high diversity of tree diameter classes, and dense canopy cover (greater than 70 percent) (Spencer et al. 2015, p. 46). Approximately 7,847 ac (3,176 ha) of the unit overlap with designated critical habitat for the federally threatened Little Kern golden trout (see 50 CFR 17.95(e) and 43 FR 15427, April 13, 1978).

Threats identified within this unit include wildfire and wildfire suppression; climate change; tree mortality from drought, disease, and insect infestation; vegetation management; exposure to toxicants; and vehicle collisions. Special management considerations or protection measures to reduce or alleviate the threats may include: (1)

Implementing forest management practices, especially the use of prescribed fire, that reduce the risk of catastrophic wildfire and improve habitat resiliency in and adjacent to fisher habitat; (2) minimizing habitat disturbance, fragmentation, and destruction (at the stand scale, home-range scale, and landscape scale) from vegetation management activities through the use of conservation measures; (3) preventing, locating, and remediating trespass marijuana grow sites and other sources of toxicants; and (4) improving the efficacy of existing road-crossing structures and installing new wildlife road crossings on major roadways. Federal lands in this unit are managed under the Sierra Nevada Forest Plan Amendment (USFS 2004, entire), the Giant Sequoia National Monument Management Plan (USFS 2012, entire), and the Approved Resource Management Plan for the Bakersfield Field Office (BLM 2014, entire).

### *Unit 3: North Sequoia*

Unit 3 consists of 114,952 ac (46,519 ha) of lands in the Sierra Nevada mountains in Tulare and Fresno Counties, California. This unit runs mostly in a north-south linear pattern from the Kings River to the north until it abuts Unit 2 at Bear Creek to the south (see the boundary description for Unit 2, above). The unit is located west of the Great Western Divide and east of Blue Ridge and the communities of Miramonte and Three Rivers. Lands within this unit include approximately 31,313 ac (12,672 ha; 27 percent) managed by USFS (Sierra National Forest and Sequoia National Forest, including Giant Sequoia National Monument), 72,185 ac (29,212 ha; 63 percent) managed by NPS (Sequoia and Kings Canyon National Parks), and 4,517 ac (1,828 ha; 4 percent) managed by BLM. Also, there are 1,889 ac (765 ha; 2 percent) in State ownership (Cal Fire and State Lands Commission) and 5,048 ac (2,043 ha; 4 percent) in private ownership. General land use within this unit includes forest management (e.g., timber harvest, fuels reduction, hazard tree management, forest restoration, prescribed fire), grazing, recreation, and management for protection of natural resources.

Unit 3 is occupied by the fisher and contains the physical and biological features essential to the conservation of the species. This unit supports high fisher occupancy rates (Tucker 2020, pers. comm.), suggesting it supports relatively high population densities (Spencer et al. 2015, p. 46) compared to other areas within its range, which provides resiliency for the DPS. This unit has high predicted habitat value due to mature forest conditions and numerous giant sequoia groves and other mixed-coniferous forests with high basal area, dense canopies, and abundant black oaks that support denning features (Spencer et al. 2015, p. 46). Approximately 118 ac (48 ha) of the unit overlap with designated critical habitat for the federally endangered California condor (see 50 CFR 17.95(b); 41 FR 41914, September 24, 1976; 42 FR 47840, September 22, 1977).

Threats identified within this unit include wildfire and wildfire suppression; climate change; tree mortality from drought, disease, and insect infestation; vegetation management; exposure to toxicants; and vehicle collisions. Special management considerations or protection measures to reduce or alleviate the threats may include: (1) Implementing forest management practices, especially the use of prescribed fire, that reduce the risk of catastrophic wildfire and improve habitat resiliency in and adjacent to fisher habitat; (2) minimizing habitat disturbance, fragmentation, and destruction (at the stand scale, home-range scale, and landscape scale) from vegetation management activities through the use of conservation measures; (3) preventing, locating, and remediating trespass marijuana grow sites and other sources of toxicants; and (4) improving the efficacy of existing road-crossing structures and installing new wildlife road crossings on major roadways. Federal lands in this unit are managed under the Sierra Nevada Forest Plan Amendment (USFS 2004, entire), the Giant Sequoia National Monument Management Plan (USFS 2012, entire), the Sequoia and Kings Canyon National Parks General Management Plan (NPS 2012, entire), and the Approved Resource Management Plan for the Bakersfield Field Office (BLM 2014, entire).



#### *Unit 4: South Sierra*

Unit 4 consists of 76,100 ac (30,796 ha) of lands in the Sierra Nevada mountains in Fresno County, California. Unit 4 is composed of two subunits.

##### **Subunit 4A: Blue Canyon**

Subunit 4A consists of 62,137 ac (25,146 ha) of lands in the Sierra Nevada mountains in Fresno County, California. Patterson Mountain marks the approximate southeastern tip of subunit 4A, which then continues to the northwest approximately to the communities of Shaver Lake and Pineridge. Subunit 4A is situated east of Cats Head Mountain and Burrough Mountain and west of Exchequer Meadow and Bald Mountain. Lands within this subunit include approximately 46,499 ac (18,817 ha; 75 percent) in Federal ownership (Sierra National Forest; USFS) and 15,638 ac (6,328 ha; 25 percent) in private ownership. Of the private lands within this subunit, we are considering excluding approximately 8,322 ac (3,368 ha) owned by Southern California Edison Company based on of their forest management practices that are compatible with fisher conservation by providing suitable habitat and reducing threats to the DPS. General land use within this subunit includes forest management (e.g., timber harvest, fuels reduction, hazard tree management, forest restoration, prescribed fire), grazing, recreation, and residential development.

Subunit 4A is occupied by the fisher and contains the physical and biological feature essential to the conservation of the species. This subunit is located between areas with high occupancy rates to the south and the recently re-colonized areas to the north, indicating this subunit is essential for continued population and range expansion. Approximately 2,598 ac (1,051 ha) of the subunit overlap with designated critical habitat for the federally threatened Yosemite toad (see 50 CFR 17.95(d) and 81 FR 59046, August 26, 2016).

Threats identified within this subunit include wildfire and wildfire suppression; climate change; tree mortality from drought, disease, and insect infestation; vegetation management; exposure to toxicants; and vehicle collisions. Special management considerations or protection measures to reduce or alleviate the threats may include: (1) Implementing forest management practices, especially the use of prescribed fire, that reduce the risk of catastrophic wildfire and improve habitat resiliency in and adjacent to fisher habitat; (2) minimizing habitat disturbance, fragmentation, and destruction (at the stand scale, home-range scale, and landscape scale) from vegetation management activities through the use of conservation measures; (3) preventing, locating, and remediating trespass marijuana grow sites and other sources of toxicants; and (4) improving the efficacy of existing road-crossing structures and installing new wildlife road crossings on major roadways. Federal lands in this subunit are managed under the Sierra Nevada Forest Plan Amendment (USFS 2004, entire).

#### Subunit 4B: Mammoth Pool East

Subunit 4B consists of 13,963 ac (5,650 ha) of lands in the Sierra Nevada mountains in Fresno County, California. This subunit is located east of Mammoth Pool Reservoir and the San Joaquin River, north of Kaiser Wilderness, south of the South Fork San Joaquin River, and west of Tule and Sample Meadows. The entirety of lands within this subunit are in Federal ownership (Sierra National Forest; USFS). General land use within this subunit includes forest management (e.g., timber harvest, fuels reduction, hazard tree management, forest restoration, prescribed fire), grazing, and recreation.

Subunit 4B is occupied by the fisher and contains the physical and biological feature essential to the conservation of the species. This subunit supports unique habitat and is at higher elevations than many other areas within the occupied range of the DPS. In addition to supporting successful reproduction, this subunit is also important in providing connectivity for fisher dispersing to and from Unit 5.

Threats identified within this subunit include wildfire and wildfire suppression; climate change; tree mortality from drought, disease, and insect infestation; vegetation management; exposure to toxicants; and vehicle collisions. Special management considerations or protection measures to reduce or alleviate the threats may include: (1) Implementing forest management practices, especially the use of prescribed fire, that reduce the risk of catastrophic wildfire and improve habitat resiliency in and adjacent to fisher habitat; (2) minimizing habitat disturbance, fragmentation, and destruction (at the stand scale, home-range scale, and landscape scale) from vegetation management activities through the use of conservation measures; (3) preventing, locating, and remediating trespass marijuana grow sites and other sources of toxicants; and (4) improving the efficacy of existing road-crossing structures and installing new wildlife road crossings on major roadways. Federal lands in this subunit are managed under the Sierra Nevada Forest Plan Amendment (USFS 2004, entire).

#### *Unit 5: North Sierra*

Unit 5 consists of 145,783 ac (58,996 ha) of lands in the Sierra Nevada mountains in Madera and Mariposa Counties, California. Unit 5 lies north and west of the San Joaquin River, east of Bass Lake, California State Route 49, and the community of El Portal, and south of the Big Oak Flat Road. Lands within this unit include approximately 95,378 ac (38,598 ha; 65 percent) managed by USFS (Sierra National Forest and Stanislaus National Forest), 40,296 ac (16,307 ha; 28 percent) managed by NPS (Yosemite National Park), 51 ac (21 ha; less than 1 percent) managed by the Bureau of Indian Affairs (a public domain allotment held in trust status; not affiliated with a recognized Tribe), and 193 ac (78 ha; less than 1 percent) managed by BLM. Also, there are 9,865 ac (3,992 ha; 7 percent) in private ownership. General land use within this unit includes forest management (e.g., timber harvest, fuels reduction, hazard tree

management, forest restoration, prescribed fire), grazing, recreation, and residential development.

Unit 5 is occupied by the fisher and contains the physical and biological feature essential to the conservation of the species. This unit supports relatively high predicted habitat quality with a high proportion of shade-tolerant incense cedar and white fir that fishers use for denning and resting (Spencer et al. 2015, p. 49). This unit was recently re-colonized in the 1990s (Tucker et al. 2014, p. 131), and its habitat is essential to support the species' continued northern expansion. Approximately 3,970 ac (1,606 ha) of the unit overlap with designated critical habitat for the federally threatened Yosemite toad (see 50 CFR 17.95(d) and 81 FR 59046, August 26, 2016).

Threats identified within this unit include wildfire and wildfire suppression; climate change; tree mortality from drought, disease, and insect infestation; vegetation management; exposure to toxicants; and vehicle collisions. Special management considerations or protection measures to reduce or alleviate the threats may include: (1) Implementing forest management practices, especially the use of prescribed fire, that reduce the risk of catastrophic wildfire and improve habitat resiliency in and adjacent to fisher habitat; (2) minimizing habitat disturbance, fragmentation, and destruction (at the stand scale, home-range scale, and landscape scale) from vegetation management activities through the use of conservation measures; (3) preventing, locating, and remediating trespass marijuana grow sites and other sources of toxicants; and (4) improving the efficacy of existing road-crossing structures and installing new wildlife road crossings on major roadways. Federal lands in this unit are managed under the Sierra Nevada Forest Plan Amendment (USFS 2004, entire), Yosemite National Park General Management Plan (NPS 1980, entire), and Approved Resource Management Plan for the Bakersfield Field Office (BLM 2014, entire).

*Unit 6: Stanislaus*

Unit 6 consists of 30,521 ac (12,352 ha) of lands in the Sierra Nevada mountains in Mariposa and Tuolumne Counties, California. Unit 6 is situated north of the Merced River and the community of El Portal, south of Sawmill Mountain, east of Scott Ridge, west of Tamarack Flat, and southwest of Ackerson Meadow. The unit forms a “U” to the east, north, and west around Anderson Flat. Lands within this unit include approximately 22,078 ac (8,935 ha; 72 percent) managed by USFS (Stanislaus National Forest) and 7,842 ac (3,174 ha; 26 percent) managed by NPS (Yosemite National Park). Also, there are 601 ac (243 ha; 2 percent) in private ownership. General land use within this unit includes forest management (e.g., timber harvest, fuels reduction, hazard tree management, forest restoration, prescribed fire), grazing, recreation, and residential development.

Unit 6 is occupied by the fisher and contains the physical and biological feature essential to the conservation of the species. This unit represents the northernmost extent of the species’ current range and was recently re-colonized over the previous decade, with possible evidence of reproduction documented for the first time in 2020 (Stock 2021, pers. comm.). This northward expansion and establishment of a subpopulation north of the Merced River improves the redundancy of the DPS.

Threats identified within this unit include wildfire and wildfire suppression; climate change; tree mortality from drought, disease, and insect infestation; vegetation management; exposure to toxicants; and vehicle collisions. Special management considerations or protection measures to reduce or alleviate the threats may include: (1) Implementing forest management practices, especially the use of prescribed fire, that reduce the risk of catastrophic wildfire and improve habitat resiliency in and adjacent to fisher habitat; (2) minimizing habitat disturbance, fragmentation, and destruction (at the stand scale, home-range scale, and landscape scale) from vegetation management activities through the use of conservation measures; (3) preventing, locating, and

remediating trespass marijuana grow sites and other sources of toxicants; and (4) improving the efficacy of existing road-crossing structures and installing new wildlife road crossings on major roadways. Federal lands in this unit are managed under the Sierra Nevada Forest Plan Amendment (USFS 2004, entire) and the Yosemite National Park General Management Plan (NPS 1980, entire).

## **References Cited**

A complete list of references cited in this document is available on the internet at <https://www.regulations.gov> and upon request from the Sacramento Fish and Wildlife Office (see **FOR FURTHER INFORMATION CONTACT**).

## **Authors**

The primary authors of this document are the staff members of the U.S. Fish and Wildlife Service Species Assessment Team and Sacramento Fish and Wildlife Office.

## **List of Subjects in 50 CFR Part 17**

Endangered and threatened species, Exports, Imports, Plants, Reporting and recordkeeping requirements, Transportation, Wildlife.

## **Proposed Regulation Promulgation**

Accordingly, we propose to amend part 17, subchapter B of chapter I, title 50 of the Code of Federal Regulations, as proposed to be amended at 86 FR 57773 (October 19, 2021) as set forth below:

### **PART 17—ENDANGERED AND THREATENED WILDLIFE AND PLANTS**

1. The authority citation for part 17 continues to read as follows:

AUTHORITY: 16 U.S.C. 1361–1407; 1531–1544; and 4201–4245, unless otherwise noted.

2. Further amend § 17.95(a), as proposed to be amended at 86 FR 57773, in the entry for “Fisher (*Pekania pennanti*), Southern Sierra Nevada Distinct Population Segment (DPS)”, by revising paragraphs (2) through (11) to read as follows:

**§ 17.95 Critical habitat—fish and wildlife.**

(a) *Mammals.*

\* \* \* \* \*

Fisher (*Pekania pennanti*), Southern Sierra Nevada Distinct Population Segment (DPS)

\* \* \* \* \*

(2) Within these areas, the physical and biological feature essential to the conservation of the Southern Sierra Nevada DPS of fisher is suitable reproductive habitat that includes intermixed denning, foraging, and dispersal areas. Such habitat provides structural features for parturition, raising kits, protection from adverse weather conditions, facilitation of safe movement, sites to rest and thermoregulate, foraging opportunities, and cover to reduce predation risk for adults and young. The characteristics of this physical and biological feature include:

(i) Forest types described as Douglas fir (*Pseudotsuga menziesii*), eastside pine, Jeffrey pine (*Pinus jeffreyi*), montane hardwood-conifer, montane hardwood, montane riparian, ponderosa pine (*Pinus ponderosa*), Sierran mixed conifer, white fir (*Abies concolor*), red fir (*Abies magnifica*), or lodgepole pine (*Pinus contorta*) of California Wildlife Habitat Relationships size and density classes 4M, 4D, 5M, 5D, or 6.

(ii) Forest stands in or near drainages with clusters of large, mature trees and snags, high canopy cover (generally greater than or equal to 60 percent), complex horizontal and vertical forest structure (e.g., multilayered canopy, moderate shrub cover, downed wood, vegetation of varying age classes), a moderate intermix of California black oak (*Quercus kelloggii*), and fairly steep slopes (greater than or equal to 17 percent).

(iii) Multiple large diameter trees (live or dead), such as conifers greater than or equal to 35 inches (in) (89 centimeters (cm)) and hardwoods greater than or equal to 25 in

(63 cm) in diameter, with cavities that provide secure natal and maternal den sites. Some of these large diameter trees or snags should also have branch platforms, broken top platforms, mistletoe (*Arceuthobium* spp.) infections, and other deformities or structures that provide resting sites.

(iv) Shrub and tree clumps, large downed logs, and other structures that provide continuous dense cover or patches of dense cover that are close together to provide protection from predators.

(v) Intermixed foraging areas that typically include a diversity of vegetation types and seral stages to support a variety of prey species (such as western gray squirrels (*Sciurus griseus*), Douglas squirrels (*Tamiasciurus douglasii*), California ground squirrels (*Otospermophilus beecheyi*), dusky-footed woodrats (*Neotoma fuscipes*), and other small mammals), and structures that provide fishers resting sites and protection from predators.

(vi) Intermixed dispersal areas that provide connectivity between patches of denning habitat to allow for movement of individuals within subpopulations. Dispersal areas must contain structures and habitat characteristics that facilitate resting and safe movement. These habitat characteristics and structures include some overhead cover from trees or shrubs (i.e., greater than 30 percent for male dispersal and greater than 60 percent for female dispersal), snags, downed logs, or other components to protect fishers from predation and allow for sufficient resting opportunities.

(3) Critical habitat does not include manmade structures (such as buildings, aqueducts, runways, roads, and other paved areas), the defensible space around buildings (defined as the area of land surrounding a building that is 100 feet (30.5 meters) or less from the building's walls), and the land on which they are located existing within the legal boundaries on the effective date of the rule.

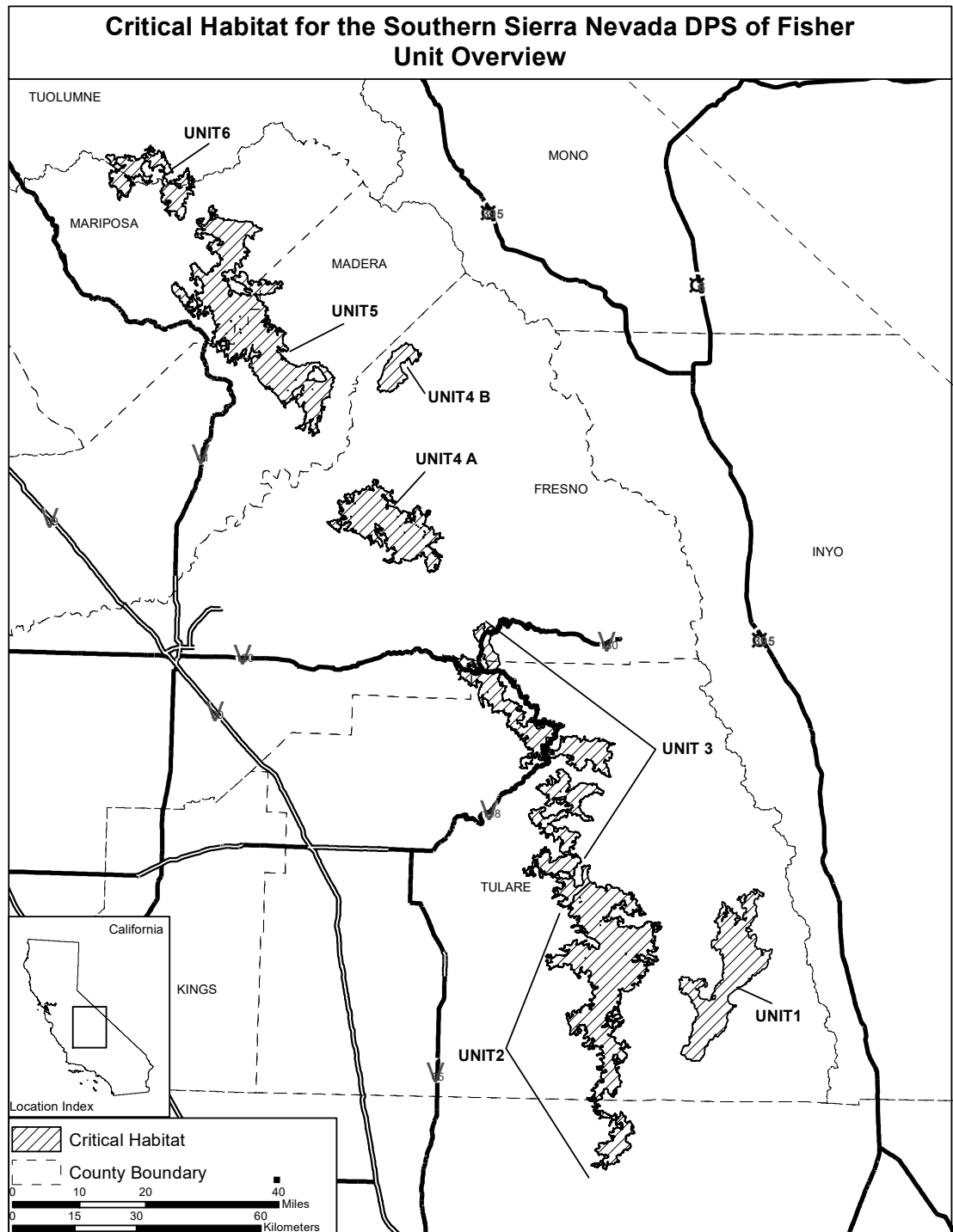
(4) Data layers defining map units were created using fisher habitat suitability



models developed by the Conservation Biology Institute, wildfire burn severity data from the U.S. Geological Survey and U.S. Forest Service, and species expert opinion. Critical habitat units were then mapped using Universal Transverse Mercator Zone 11N coordinates. The maps in this entry, as modified by any accompanying regulatory text, establish the boundaries of the critical habitat designation. The coordinates or plot points or both on which each map is based are available to the public at <https://www.regulations.gov> at Docket No. FWS-R8-ES-2021-0060 and at the field office responsible for this designation. You may obtain field office location information by contacting one of the Service regional offices, the addresses of which are listed at 50 CFR 2.2.

(5) Index map follows:

**Figure 1 to Fisher (*Pekania pennanti*), Southern Sierra Nevada DPS  
paragraph (5)**



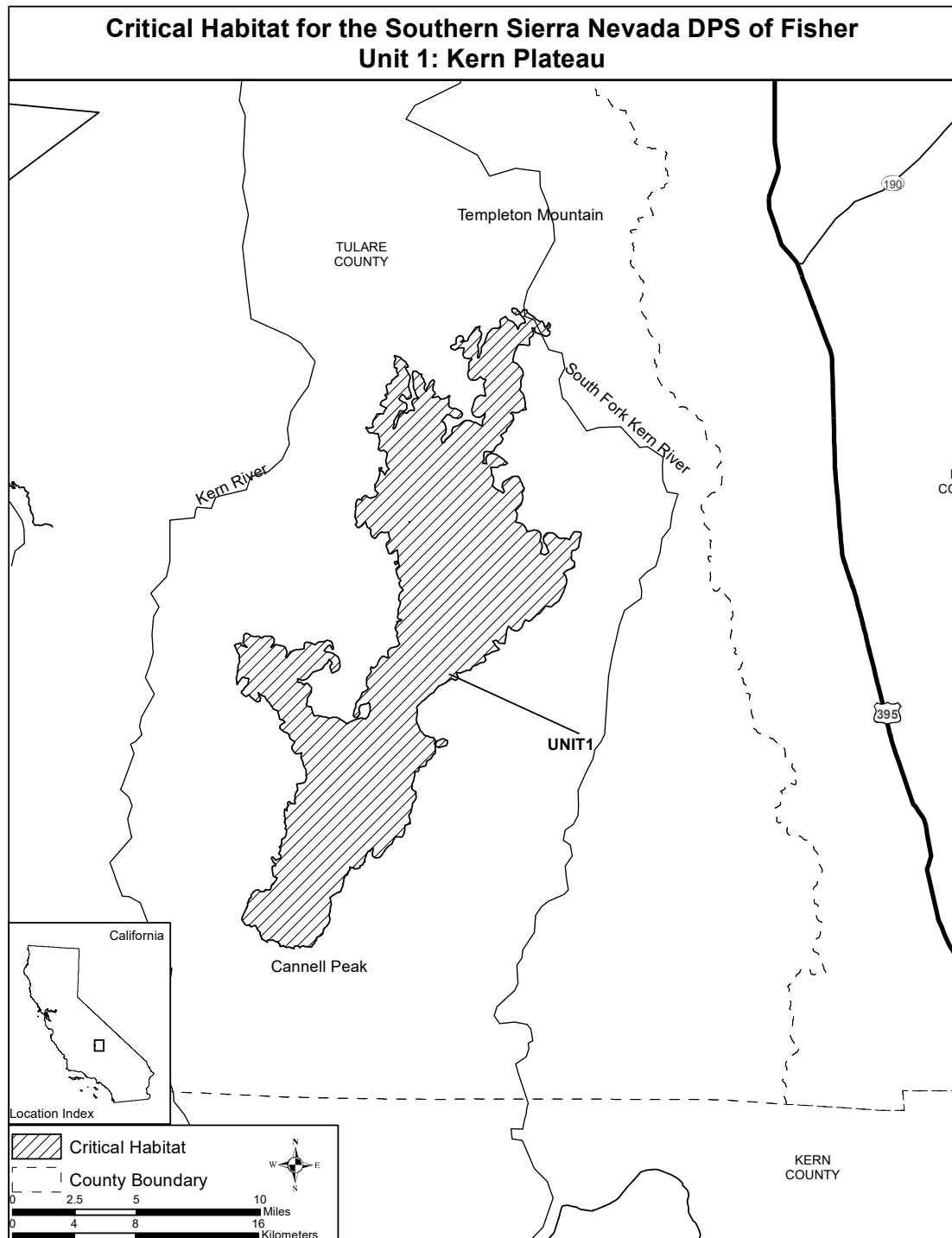
(6) Unit 1: Kern Plateau, Tulare County, California.

(i) Unit 1 consists of 78,178 acres (ac) (31,637 hectares (ha)) of occupied habitat on the Kern Plateau, east of the Kern River, west of South Fork Kern River and Kennedy Meadows, north of Cannell Peak, and south of Templeton Mountain. Lands within this unit include 77,397 ac (31,322) ac in Federal ownership (Inyo National Forest and

Sequoia National Forest) and approximately 781 ac (316 ha) in private ownership.

(ii) Map of Unit 1 follows:

**Figure 2 to Fisher (*Pekania pennanti*), Southern Sierra Nevada DPS**  
**paragraph (6)(ii)**

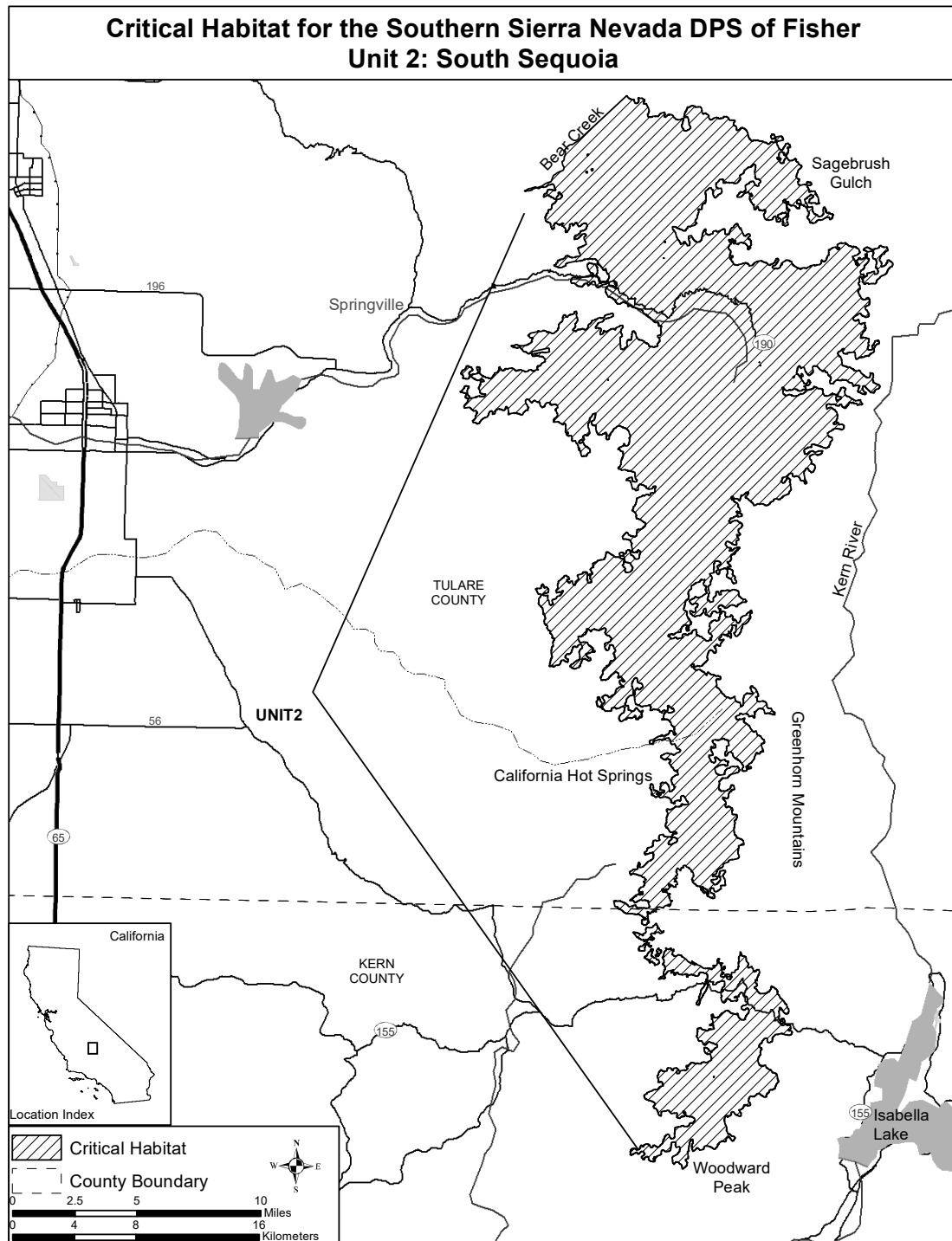


(7) Unit 2: South Sequoia, Kern and Tulare Counties, California.

(i) Unit 2 consists of approximately 149,962 ac (60,687 ha) of occupied habitat in the Sierra Nevada mountains, extending northward from approximately Woodward Peak in the Greenhorn Mountains until it abuts Unit 3 to the north. The northern boundary of Unit 2 roughly follows Bear Creek in the Tule River Watershed until its headwaters, then continues in a linear path to the eastern edge of the unit. The unit lies west of the Kern River from Isabella Lake to its confluence with the Little Kern River and west of the Little Kern River until the vicinity between Moses Mountain and Maggie Mountain. Unit 2 is east of Springville and California Hot Springs. Lands within this unit include 125,568 ac (50,815 ha) in Federal ownership (Sequoia National Forest, Giant Sequoia National Monument, and Bureau of Land Management), 3,461 ac (1,401 ha) in State ownership (California Department of Forestry and Fire Protection (Cal Fire) and State Lands Commission), 14,622 ac (5,917 ha) of lands that are held in trust by the United States through the Bureau of Indian Affairs for the Tule River Indian Tribe of the Tule River Reservation, and 6,310 ac (2,554 ha) in private ownership.

(ii) Map of Unit 2 follows:

**Figure 3 to Fisher (*Pekania pennanti*), Southern Sierra Nevada DPS  
paragraph (7)(ii)**



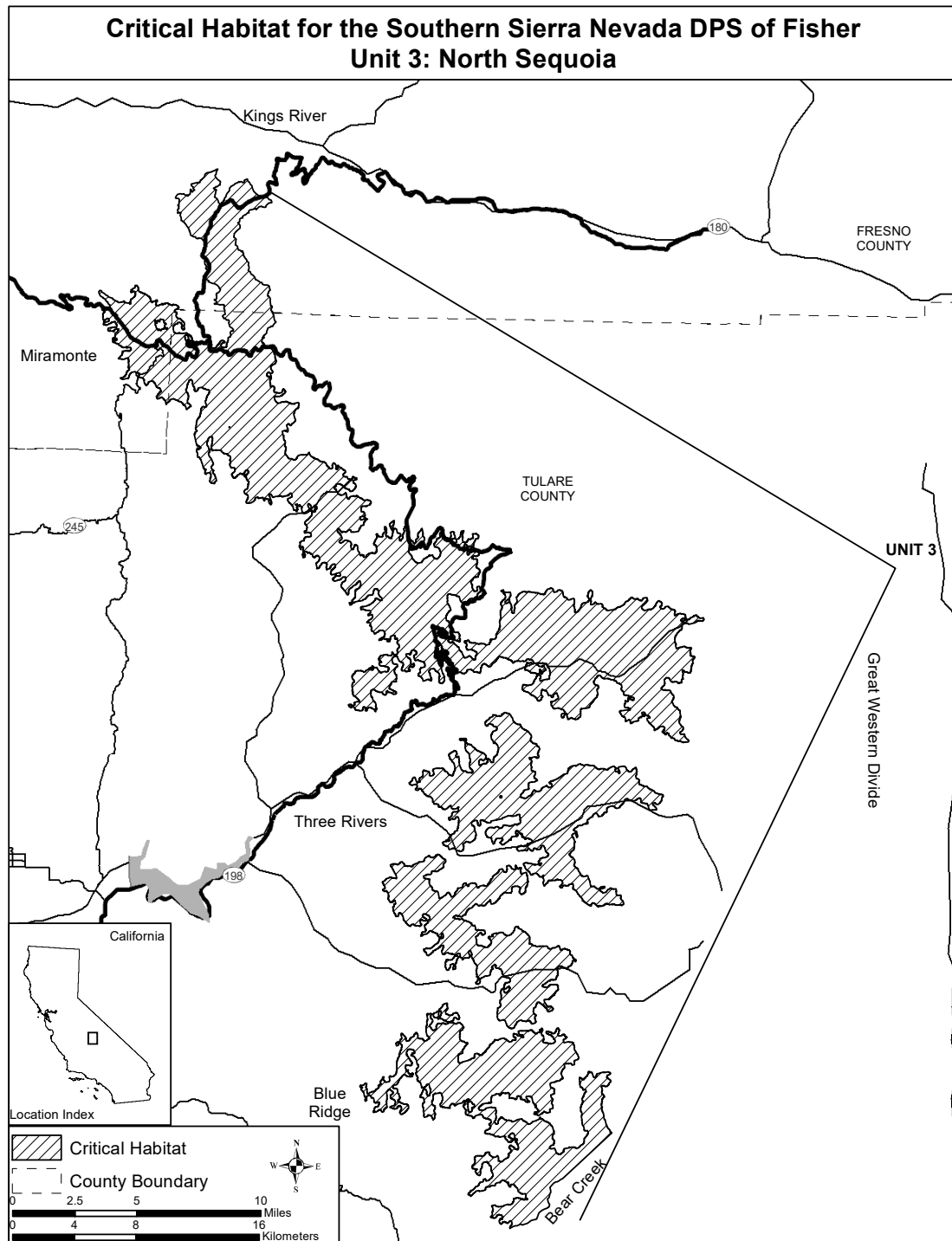
(8) Unit 3: North Sequoia, Tulare and Fresno Counties, California.

(i) Unit 3 consists of 114,952 ac (46,519 ha) of occupied habitat in the Sierra Nevada mountains. This unit runs mostly in a north-south liner pattern from the Kings River to the north until it abuts Unit 2 to the south. The unit is located west of the Great Western Divide and east of Blue Ridge and the communities of Miramonte and Three

Rivers. Lands within this unit include approximately 108,015 ac (43,712 ha) in Federal ownership (Sierra National Forest, Sequoia National Forest, Giant Sequoia National Monument, Sequoia and Kings Canyon National Parks, and Bureau of Land Management), 1,889 ac (765 ha) in State ownership (Cal Fire and State Lands Commission) and 5,048 ac (2,043 ha) in private ownership.

(ii) Map of Unit 3 follows:

**Figure 4 to Fisher (*Pekania pennanti*), Southern Sierra Nevada DPS  
paragraph (8)(ii)**



(9) Unit 4: South Sierra, Fresno County, California.

(i) Unit 4 consists of two subunits comprising 76,100 ac (30,796 ha) of occupied habitat in the Sierra Nevada mountains.

(A) Subunit 4A (Blue Canyon) consists of 62,137 ac (25,146 ha) of lands in the Sierra Nevada mountains. Patterson Mountain marks the approximate southeastern tip of

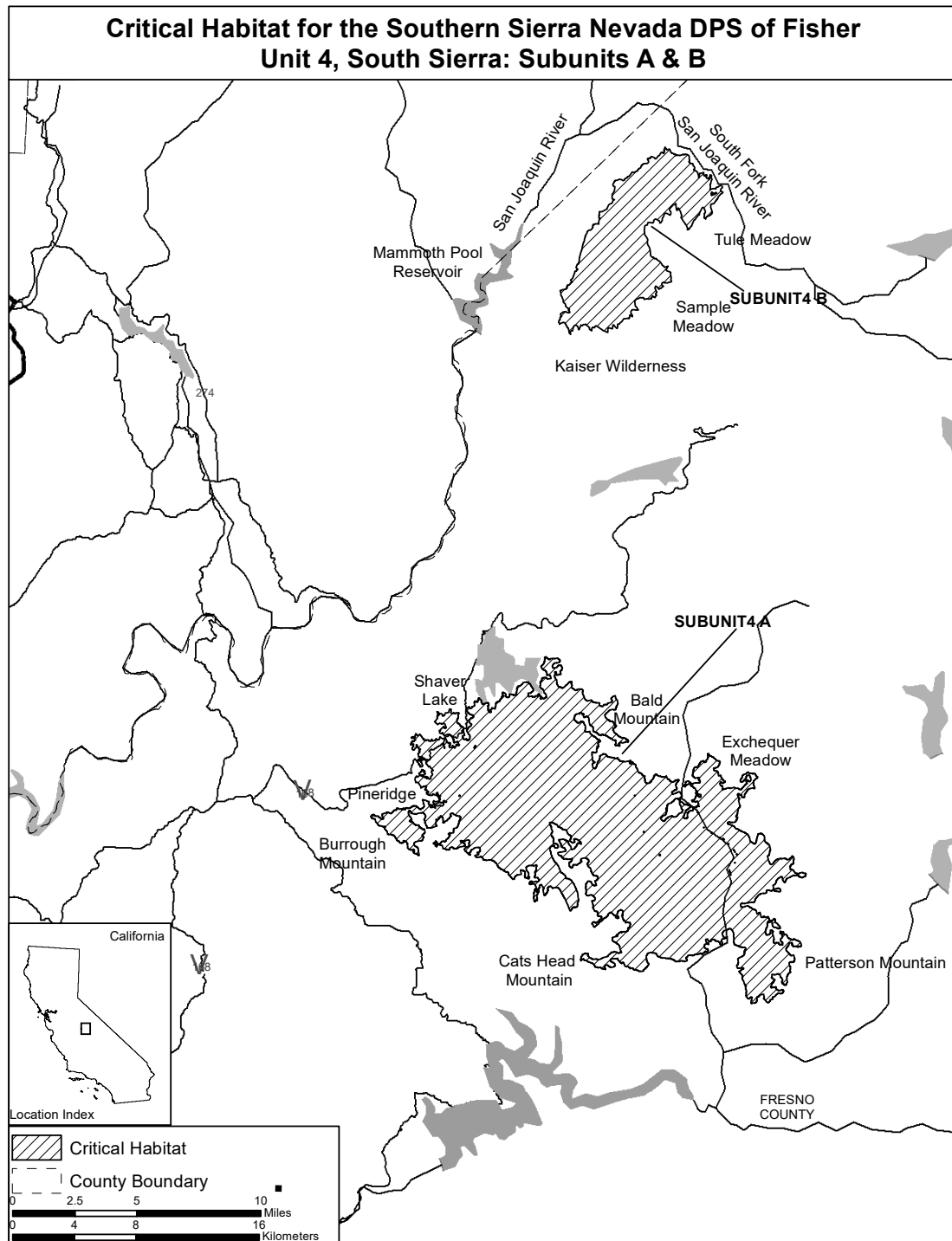
Subunit 4A, which then continues to the northwest approximately to the communities of Shaver Lake and Pineridge. Lands within this subunit include approximately 46,499 ac (18,817 ha) in Federal ownership (Sierra National Forest) and 15,638 ac (6,328 ha) in private ownership.

(B) Subunit 4B (Mammoth Pool East) consists of 13,963 ac (5,650 ha) of lands in the Sierra Nevada mountains. This subunit is located west of Mammoth Pool Reservoir and the San Joaquin River, north of Kaiser Wilderness, south of Ansel Adams Wilderness, and east of Tule, Half Corral, and Sample Meadows. The entirety of lands within subunit are in Federal ownership (Sierra National Forest).

(ii) Map of Unit 4 follows:

**Figure 5 to Fisher (*Pekania pennanti*), Southern Sierra Nevada DPS  
paragraph (9)(ii)**





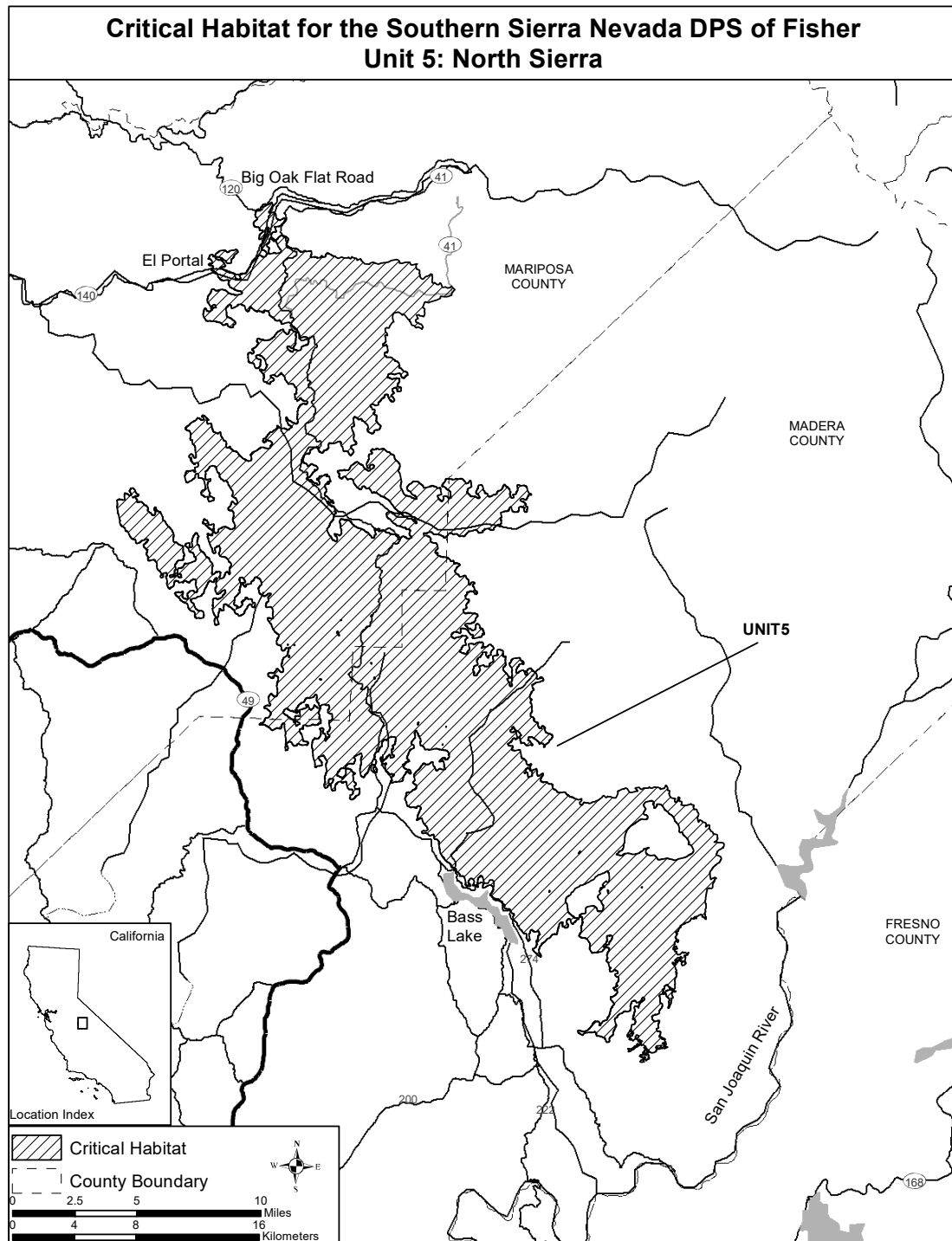
(10) Unit 5: North Sierra, Madera and Mariposa Counties, California.

(i) Unit 5 consists of 145,783 ac (58,996 ha) of occupied habitat in the Sierra Nevada mountains north and west of the San Joaquin River; east of Bass Lake, California State Route 49, and the unincorporated community of El Portal; and south of Big Oak

Flat Road. Lands within this unit include 135,918 ac (55,004 ha) in Federal ownership (Sierra National Forest, Stanislaus National Forest, Yosemite National Park, Bureau of Indian Affairs, and Bureau of Land Management) and 9,865 ac (3,992 ha) in private ownership.

(ii) Map of Unit 5 follows:

**Figure 6 to Fisher (*Pekania pennanti*), Southern Sierra Nevada DPS  
paragraph (10)(ii)**



(11) Unit 6: Stanislaus, Mariposa and Tuolumne Counties, California.

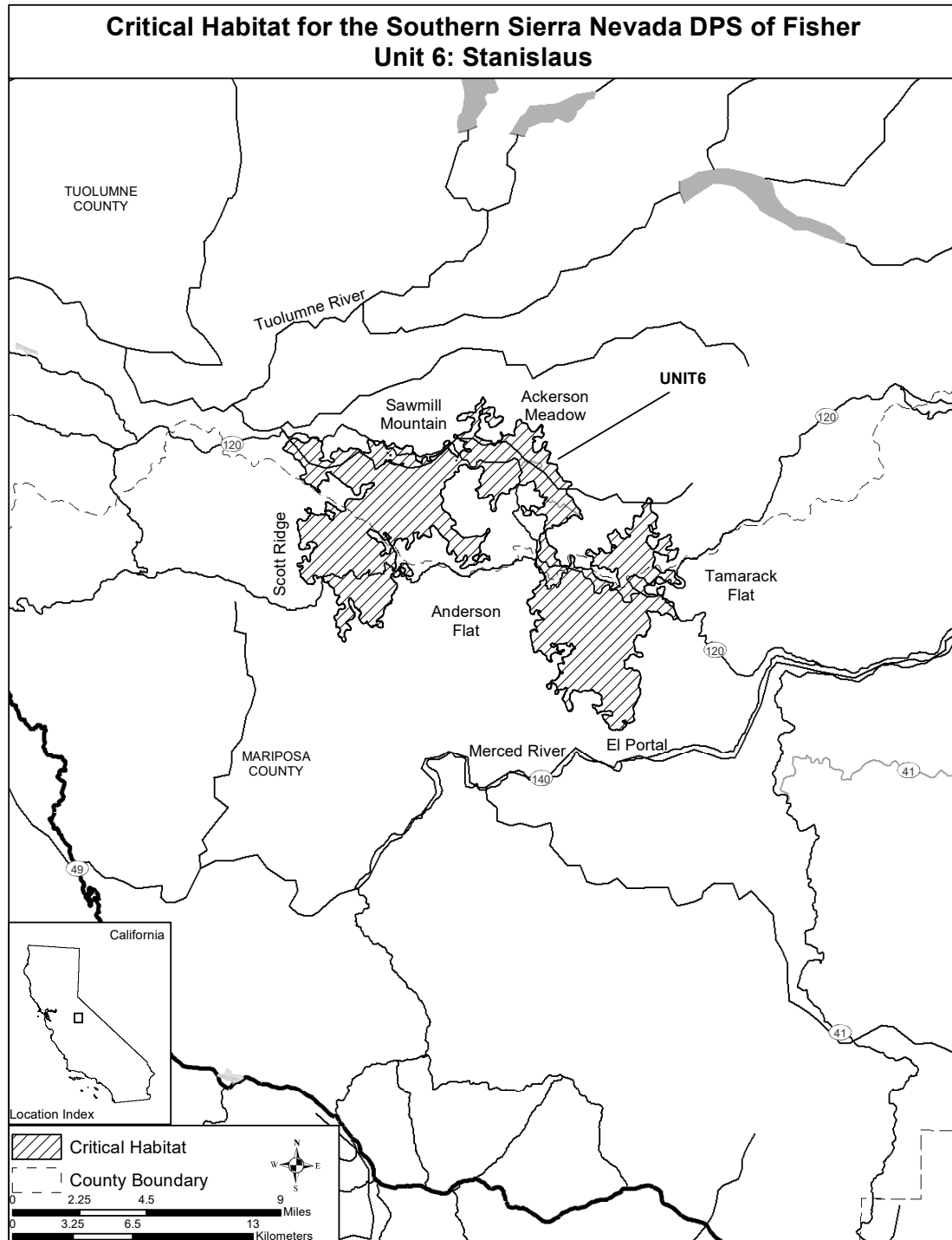
(i) Unit 6 consists of 30,521 ac (12,352 ha) of occupied habitat situated north of the Merced River and the community of El Portal and southwest of Ackerson Meadow. The unit forms a “U” to the east, north, and west around Anderson Flat and Grizzly Flat. Lands within this unit include 29,920 ac (12,108 ha) in Federal ownership (Stanislaus

National Forest and Yosemite National Park) and 601 ac (243 ha) in private ownership.

(ii) Map of Unit 6 follows:

**Figure 7 to Fisher (*Pekania pennanti*), Southern Sierra Nevada DPS**

**paragraph (11)(ii)**



\* \* \* \* \*

**Martha Williams,**  
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